

## Product Evaluation

CWSF17 | 0920

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at 1-800-248-6032.

**Evaluation ID:** CWSF-17

**Effective Date:** September 1, 2020

**Re-evaluation Date:** September 2024

**Product Name:** Series FG-5000 Hurricane Resistant Aluminum Storefront System, Impact Resistant

**Manufacturer:** Old castle BuildingEnvelope  
803 Airport Road  
Terrell, TX 75160  
(972) 551-6100

**General Description:** The Series FG-5000 is an aluminum frame storefront used for commercial installations. This evaluation report includes the following storefront assemblies:

- Multi Panels
- Single Panels
- 90 Degree Corner Panels

**Doors:** Doors referenced in this product evaluation report are Oldcastle BuildingEnvelope door products. The Oldcastle BuildingEnvelope doors used with these assemblies must be listed in separate TDI product evaluation reports.

**Product Identification:** An Oldcastle BuildingEnvelope label will be affixed to the storefront assembly.

The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (Series FG-5000 Flush Glazed Aluminum Storefront System); that the design pressure and dimensions are per drawing 20-015; and that the product complies with TAS 201-94, TAS 202-94, TAS 203-94; Large and Small Missile Impact Rated.

**Limitations:**

**Design Drawings:** Storefront assemblies must comply and be installed in accordance with the following design drawing:

Drawing No. 20-015, "Series FG-5000 Flush Glazed Aluminum Window Wall System for Use in Hurricane Zones Requiring Large & Small Missile Impact Protection. (Wet & Dry Glazed)," Sheets 1 thru 21 of 21, dated February 3, 2020, signed and sealed by Walter A. Tillit, Jr, P.E on February 26, 2020. This evaluation report refers to the stated drawings as the approved drawings.

**Fabrication and Assembly:** Oldcastle BuildingEnvelope Series FG-5000 aluminum storefront systems are fabricated in the factory. The aluminum storefront systems are assembled and glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

**Design Pressure (DP):**

- The storefront system has a maximum design pressure rating of +90 psf / -90 psf. Refer to the approved drawing for specific design pressure requirements.
- If the storefront system is used with doors, then the design pressure rating of the complete assembly will be the lesser of the allowable design pressure rating for the doors and the storefront system in this evaluation report.

**Impact Resistance:** The storefront systems satisfy TDI's criteria for protection from windborne debris. These assemblies passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996. Install these assemblies at any height on the structure that does not exceed the assembly's design pressure rating. These assemblies do not require protection with an impact protective system when installed in areas that require windborne debris protection.

**Acceptance of Other Assemblies:**

- The approved drawings specify the limitations on overall width.
- Assemblies must not exceed the heights shown on the approved drawings.
- Doors used with these assemblies must be listed in separate TDI product evaluation reports.

**Installation:**

**General:** Prepare and install the assembly in accordance with the Oldcastle BuildingEnvelope "StormMax FG-5000 Installation and Glazing Manual" and the approved drawings specified in this evaluation report. Detailed installation instructions are available from Oldcastle BuildingEnvelope.

**Installation:**

**Wall Framing Construction:** The aluminum storefront system may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- concrete (minimum compressive strength: 3,000 psi)
- grout-filled concrete masonry unit (minimum compressive strength: 1,500 psi)
- steel (minimum 12-gauge,  $F_y = 36$  ksi)
- steel (minimum 1/4" thick,  $F_y=36$  ksi)
- wood (minimum specific gravity,  $SG=0.55$ )

**Fastener Requirements:**

- Refer to the approved drawings for the anchor layout and notes.
- Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

**Note:** Keep the manufacturer's installation instructions and the approved drawings available at the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.